

Abstract: The aim of this work is to introduce general notions of theory of order statistics and the method of ranked set sampling (RSS). This statistical method is based on ranking of observed random variables which allows us to construct an unbiased estimator with lower variance than by using the method of simple random sampling. In this work we will study estimators of the expected value. Furthermore, we will investigate some properties of estimators based on RSS and some modifications of this method. The thesis contains a chapter about software simulations which verify the properties of estimators based on RSS.